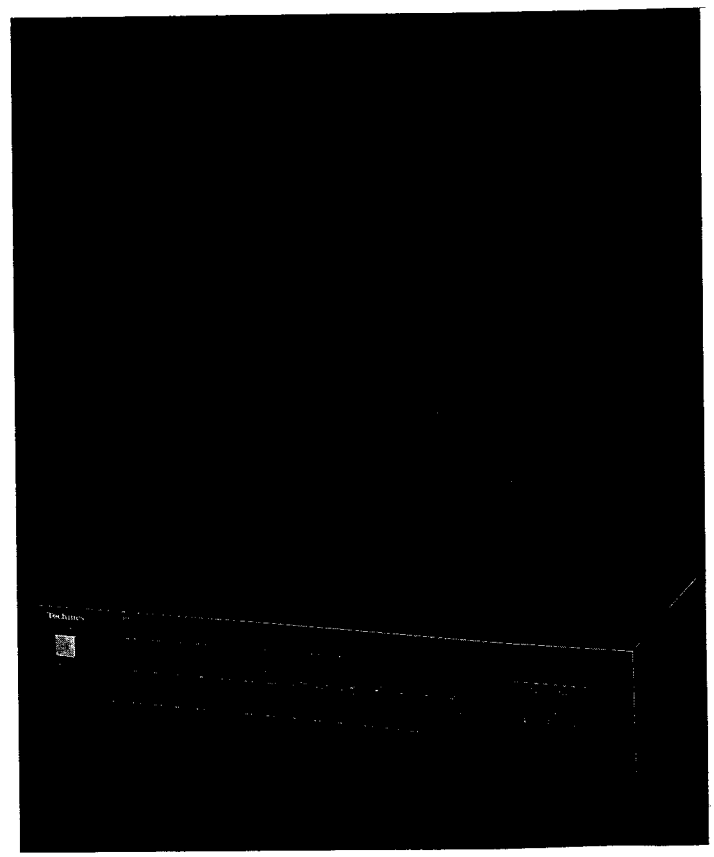
Technics

Stereo Graphic Equalizer

SH-8029

OPERATING INSTRUCTIONS



Before operating this unit, please read these instructions completely.

Dear Stereo Fan

We want to thank you for selecting this product and to welcome you to the growing family of satisfied Technics product owners around the world.
We feel certain you will get maximum enjoyment from this new addition to your home.
Please read these operating instructions carefully, and be sure to keep them handy for convenient reference.

CONTENTS

- •ACCESSORIES 2
- •MAINTENANCE OF EXTERNAL SURFACES 2
- •BEFORE USING THIS UNIT 2
- •FOR SAFE USE OF THIS UNIT ..... 2~3
- •STEREO SYSTEM COMPONENTS AND THEIR CONNECTIONS 4
- •FRONT PANEL CONTROLS AND THEIR FUNCTIONS 5
- •OPERATION 6
- •EXAMPLES OF APPLICATIONS UTILIZING THE SH-8029 FUNCTIONS 7
- •TROUBLESHOOTING GUIDE C2
- •TECHNICAL SPECIFICATIONS C2
- •TOTAL FREQUENCY RESPONSE C2

ACCESSORIES

Stereo connection cables 2

MAINTENANCE OF EXTERNAL SURFACES

To clean, use a soft dry cloth.
If the surfaces are extremely dirty, use a soft cloth, dipped into a soap and water or a weak detergent solution.
Wring the cloth well before wiping the unit.
Wipe once again with a soft dry cloth.
Never use alcohol, paint thinner, or benzine, nor a chemically treated cloth to clean this unit.
Such chemicals may mar the finish of your unit.

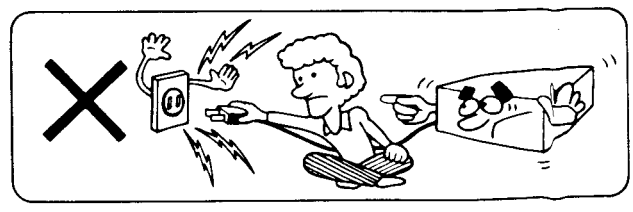
BEFORE USING THIS UNIT

Be sure to disconnect the mains cord before adjusting the voltage selector.
Use a minus (−) screwdriver to set the voltage selector (on the rear panel) to the voltage setting for the area in which the unit will be used.
Note that this unit will be seriously damaged if this setting is not made correctly.

FOR SAFE USE OF THIS UNIT

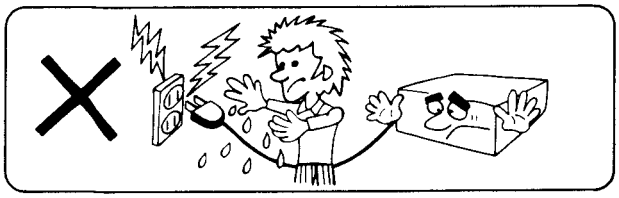
■ Use a standard electrical AC wall outlet

1. **Use from an AC power source of high voltage, such as for air conditioners, is very dangerous.**
   Be extremely careful not to make a connection to the electrical outlet for a large air conditioner or central-heating unit which uses high voltage, because there is the possibility of fire.
2. **A DC power source cannot be used.**
   Be sure to check the power source carefully, especially on a ship or other place where DC is used.



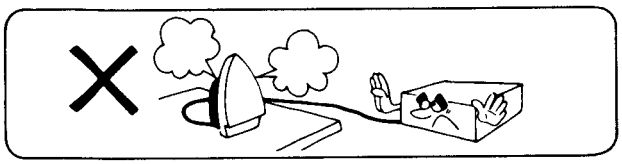
■ Connection and removal of the power cord plug

1. **Wet hands are dangerous.**
   A dangerous electric shock may result if the plug is touched by wet hands.
2. **Don't pull the power cord.**
   Always grasp the plug; never pull the cord itself.



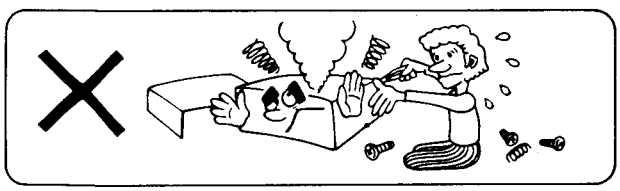
■ AC outlet on rear panel

1. **Any equipment connected here should have specified power consumption or less.**
   This outlet is exclusively for the connection of other audio equipment, such as a tape deck. Be sure the power consumption does not exceed the wattage specified near the AC outlet.
2. **Never connect other electrical appliances, such as an iron or toaster.**
   If appliances with a large power consumption are connected, an unexpected accident might occur as a result of overheating.



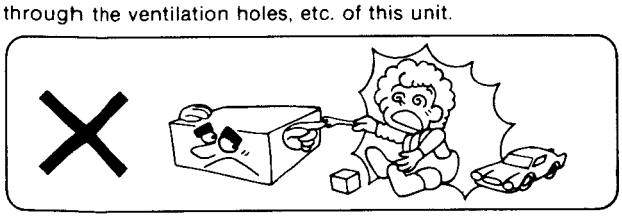
■ Never attempt to repair or reconstruct this unit

A serious electric shock might occur if this unit is repaired, disassembled or reconstructed by unauthorized persons, or if the internal parts are accidently touched.



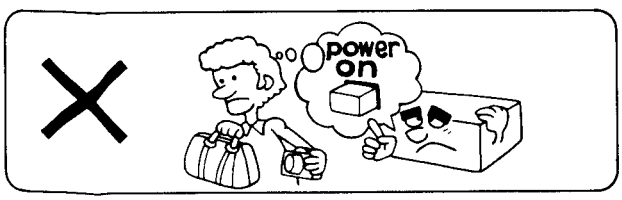
■ For families with children

Never permit children to put anything, especially metal, inside this unit. A serious electric shock or malfunction could occur if articles such as coins, needles, screwdrivers, etc. are inserted through the ventilation holes, etc. of this unit.



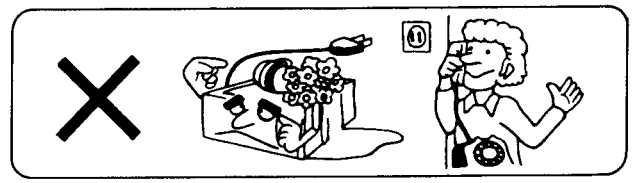
■ Turn off after use

If the unit is left for a long time with the power on, this will not only shorten its useful operation life, but may also cause other unexpected trouble.



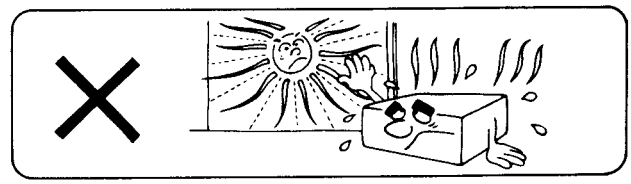
■ If water is spilled on the unit

Be extremely careful if water is spilled on the unit, because a fire or serious electric shock might occur. Immediately disconnect the power cord plug, and consult with your dealer.



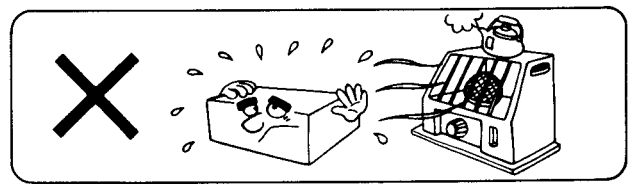
■ Place the unit where it will be well ventilated, and away from direct sunlight

Place this unit at least 10 cm (4") away from wall surfaces, etc., and away from direct sunlight. Be careful that curtains and similar materials do not obstruct the ventilation holes.



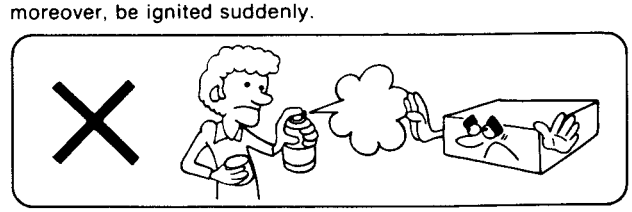
■ Keep the unit away from stoves, etc.

Heat can damage the external surfaces as well as internal circuits and components.



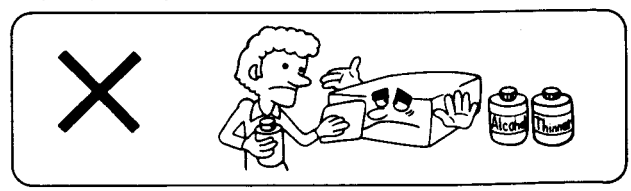
■ Avoid spray-type insecticides

Insecticides might cause cracks or "cloudiness" in the cabinet and plastic parts of this unit. The gas used in such sprays might, moreover, be ignited suddenly.



■ Never use alcohol or paint thinner

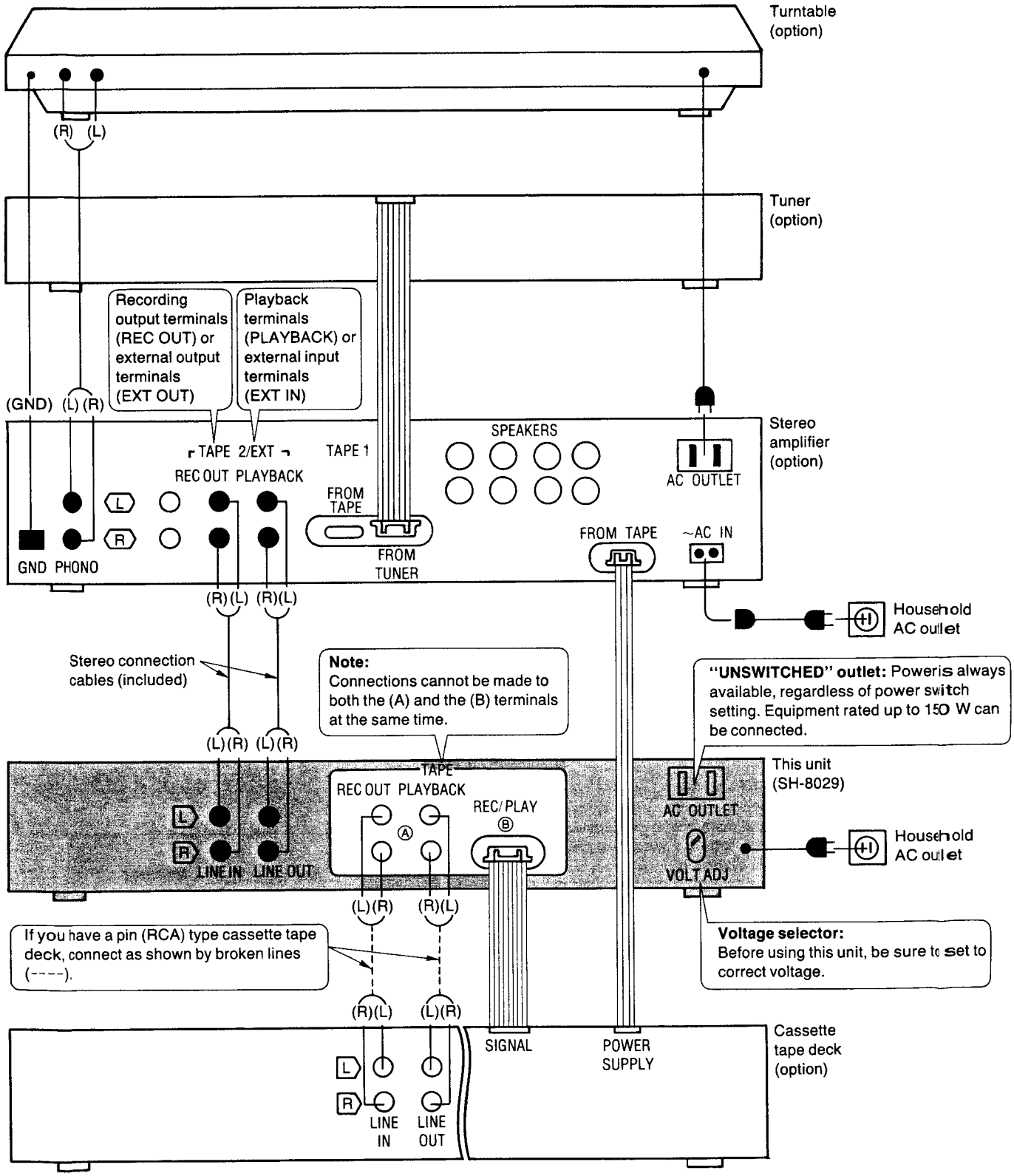
These and similar chemicals should never be used, because they may damage the finish.



■ If trouble occurs

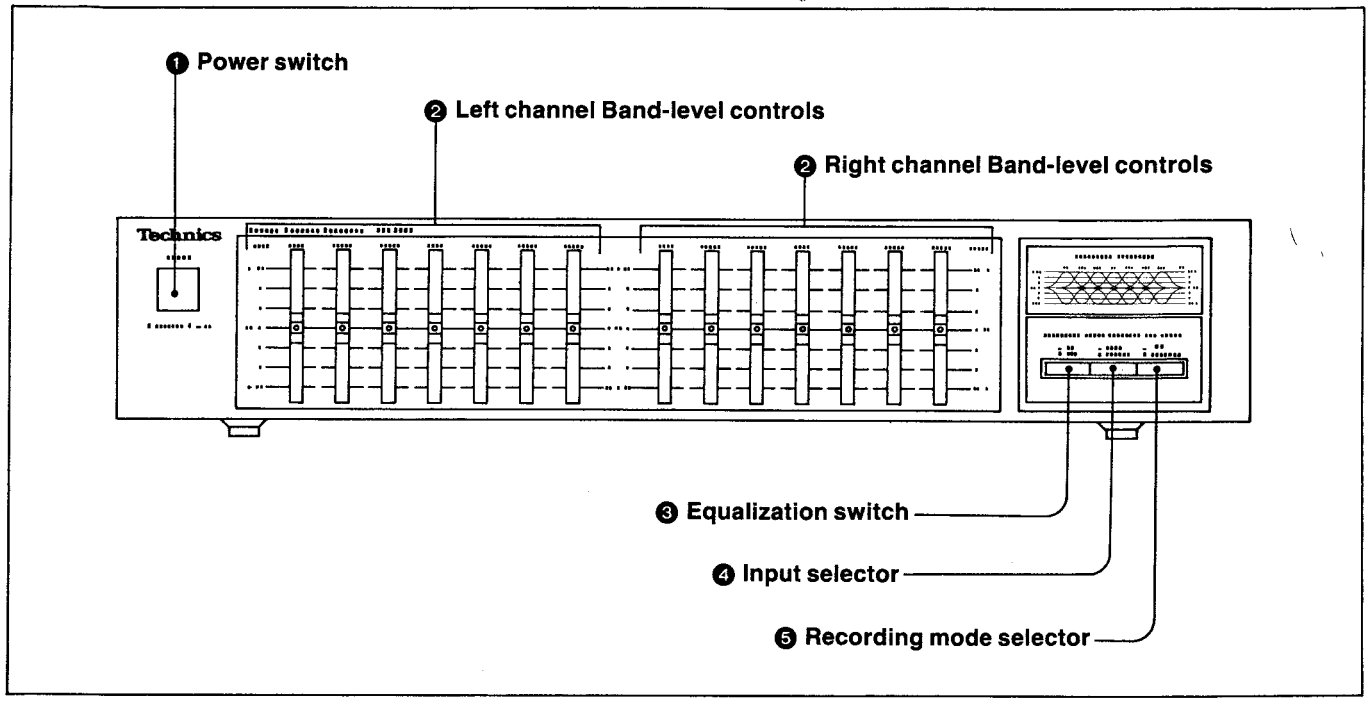
If, during operation, the sound is interrupted or indicators no longer illuminate, or if abnormal odor or smoke is detected, immediately disconnect the power cord plug, and contact your dealer or an Authorized Service Center.

STEREO SYSTEM COMPONENTS AND THEIR CONNECTIONS



Note that the way the input and output cords are routed (for example, if they are tangled with the power cord) could cause a hum to be emitted.

FRONT PANEL CONTROLS AND THEIR FUNCTIONS



❶ Power "standby ⏻ • on" switch

This switch turns on and off the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the "standby ⏻" position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

❷ Band-level controls

These levers are used to adjust the 7 frequency levels that result from dividing the 63 Hz~16 kHz frequency range into 7.

When these levers are moved in the "+ dB" direction, peak frequency characteristics are obtained. When they are moved in the "– dB" direction, dip frequency characteristics are obtained. These characteristics can be emphasized or attenuated a maximum of 12 dB.

When the power switch is set to the "on" position, the tip of these levers will illuminate.

❸ Equalization switch (equalizer)

This switch can be used to turn the equalization circuitry on and off.

on (▙_▄):

Set to this position for equalizer correction.

off (▄_▙):

Set to this position to turn off equalizer correction. By turning this switch on and off, the equalizer effect can also be checked. When this switch is in the "off" (▄_▙) position, signals will still pass through the unit and be emitted, regardless of whether the power switch ❶ is in the "on" or "standby ⏻" position.

❹ Input selector (input selector)

source (▄_▙):

Set to this position to listen to the radio broadcast, compact disc or a phono disc.

tape (▙_▄):

Set to this position to listen to a tape deck connected to the back of this unit.

❺ Recording mode selector (rec mode)

straight (▄_▙):

Set to this position to record without equalizer correction.

EQ (▙_▄):

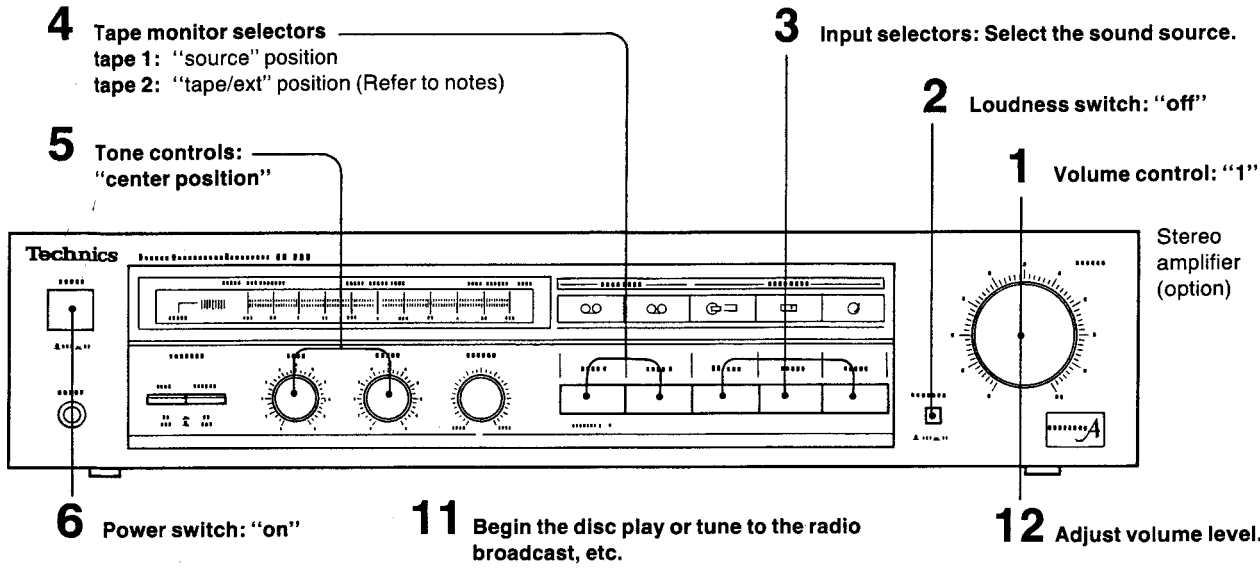
Set to this position in order to make a tape recording of a radio broadcast, compact disc or a phono disc while controlling the frequency response.

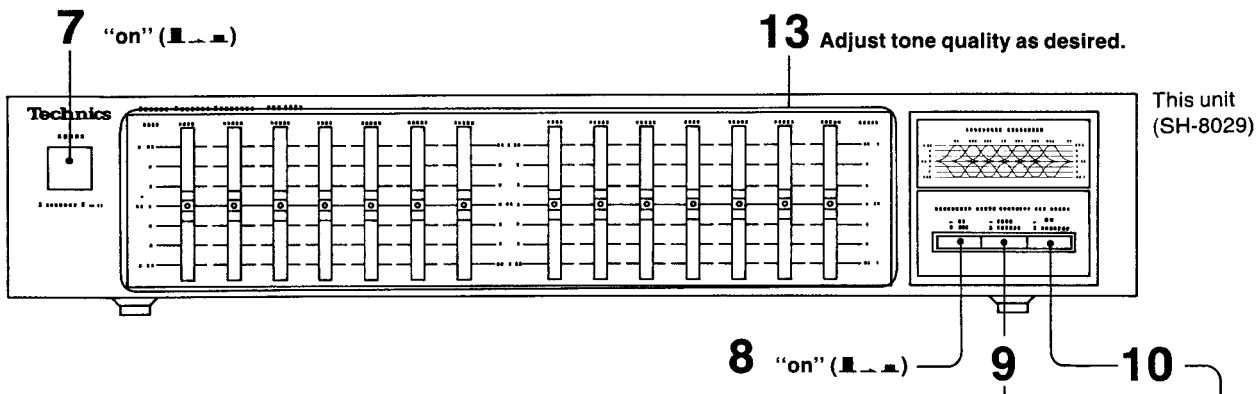
Note:

The equalization switch ❸ must be set to the "on" (▙_▄) position and then the input selector ❹ must be set to the "source" (▄_▙) position, otherwise the frequency response cannot be controlled.

This only works for tape deck connected to this unit.

OPERATION

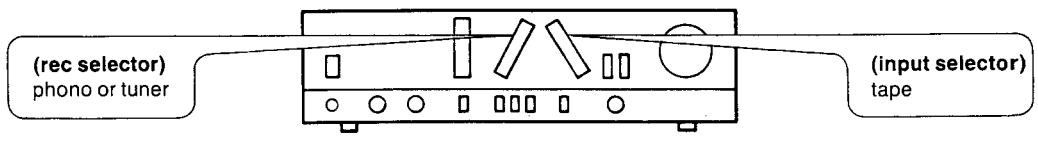

4 Tape monitor selectors
tape 1: "source" position
tape 2: "tape/ext" position (Refer to notes)
3 Input selectors: Select the sound source.
2 Loudness switch: "off"
5 Tone controls: "center position"
1 Volume control: "1"
Technics
Stereo amplifier (option)
6 Power switch: "on"
11 Begin the disc play or tune to the radio broadcast, etc.
12 Adjust volume level.



	input selector	rec mode
To listen to corrected sound of radio broadcast, compact disc or phono disc.	"source" (▄▁▁▙)	Set to any position.
To record corrected sound of radio broadcast, compact disc or phono disc.		"EQ" (▙▁▁▄)
To record the uncorrected sound of radio broadcast, compact disc or phono disc.		"straight" (▄▁▁▙)
To listen to corrected sound of tape deck.	"tape" (▙▁▁▄)	Set to any position.
Press the equalization switch (equalizer) in to the "off" (▄▁▁▙) position to listen to uncorrected sound, or when recording.		

Notes

- **If the amplifier has a recording mode selector and an input selector:** (Make setting as shown in the figure.)



- If your amplifier has terminals (GRAPHIC EQ./EXTERNAL) for connection of other equipment, use of the recording mode selector is unnecessary.

EXAMPLES OF APPLICATIONS UTILIZING THE SH-8029 FUNCTIONS

The sound level of the 7 frequency divisions in the 63 Hz~16 kHz frequency range can be easily and selectively corrected by means of the band level control of this unit.

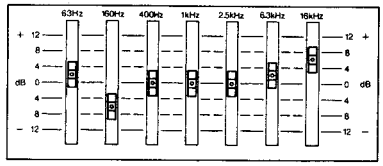
1. Complete audio room correction—including the correction of both stereo equipment and room acoustics.
2. Personalized sound quality control.
3. Creating an original tape collection of tapes tailored to your car stereo, or tapes of live recordings, etc.
4. Reduction of noise, prevention of howling. These are merely a few of the possibilities that sound quality and room acoustic correction open up for the serious listener.

■ Correcting room acoustics

Each room has its own particular effects on frequency characteristics. These effects are determined by a number of conditions, such as room size, furnishings, etc.
The 7 separate divisions of the band level control on the SH-8029 make it possible to selectively correct only the frequency ranges necessary to suit the conditions of each listening room.

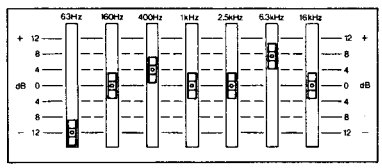
An example of room acoustics correction

In order to correct the peaks and dips in bass sounds caused by reflection, reduce the 160 Hz level 4~6 dB and then, rise the level of sounds below 63 Hz and above 6.3 kHz vicinity slightly.



■ Cutting the noise from live recording tapes

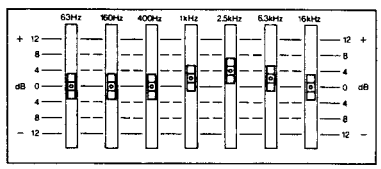
Live tapes recorded outdoors generally contain popping noises caused by wind and various other noises from the surrounding area. In order to effectively eliminate wind noise, cut bass sounds below 63 Hz and raise the level of sounds in the 400 Hz range. Then control sounds made by birds, etc., with a 6.3 kHz adjustment.



■ Producing clear vocals

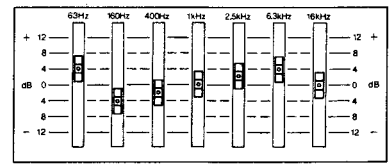
For female vocals, raise the level of the 1 kHz~2.5 kHz range by 2~4 dB. To rectify omission, raise the level of the 6.3 kHz vicinity slightly.
Male vocals can be improved by raising the level of the 400 Hz~2.5 kHz range.

Below is an example of a female vocal correction.



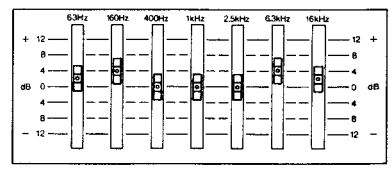
■ Making tapes for car stereos

Tapes can be made exclusively for the listening conditions inside a vehicle. Merely raise the 63 Hz level 3~4 dB.
For medium and low frequencies, centering on the 400 Hz vicinity, lower the modulating effect by raising the 2.5 kHz~6.3 kHz vicinity by 2~4 dB.



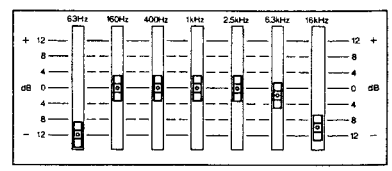
■ Adding some power to disco music

Increase the power of bass guitars and bass drums by raising the level of the 63 Hz~160 Hz range, and raise the level of sounds from 6.3 kHz to 16 kHz. The result will be greatly emphasized low frequency sounds and strong, clear high frequency sounds.



■ Cutting noise from discs

Noises from warped discs are low frequency noise components. Lowering the sound level of the 63 Hz vicinity can eliminate these.
As for cutting the noise from old discs, all band level control levers should first be set to their exact mid-position (flattening the equalizer effect) and then lowered one by one to the "−12 dB" position, listening to the effect of each adjustment.
The noise components can thus be found and cut without deteriorating the sound quality.



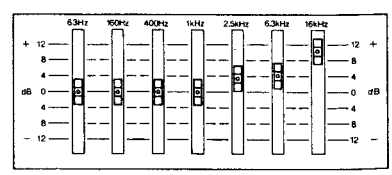
■ Reducing tape hiss

Tape hiss can be effectively reduced by slightly raising the level of high frequency (above 2.5 kHz) sounds during tape deck recording, and then lowering them during playback.

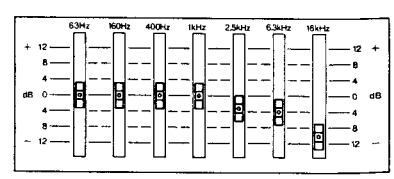
Note:

If sounds above 6.3 kHz are raised too much, distortion may result in the tape deck. Prevent this by watching the level meters of the tape deck and setting the recording levels appropriately.

recording



playback



TROUBLESHOOTING GUIDE

Before requesting service for this unit, check this table to determine if the problem can be solved as described below. If the problem still persists after making these checks, or if there are symptoms of malfunction not described in this table, it is recommended that you consult the store where this unit was purchased or your local Service Center (see list included) for further information and assistance.

Problem	Probable cause(s)	Suggested remedy
No sound	•Incorrect connection.	•Refer to page 4.
	•The power switch is in the "standby(⏻)" (▂ ▁ ▙) position and the equalization switch is set to the "on" (▙ ▁ ▂) position.	•Turn the power switch "standby(⏻)" (▂ ▁ ▙) and, to use the stereo system, set the equalization switch also to the "off" (▂ ▁ ▙) position.
Correction is not possible at recording	•The equalization switch is set to the "off" (▂ ▁ ▙) position.	•Set the equalization switch to the "on" (▙ ▁ ▂) position.
	•The recording mode selector is set to the "straight" (▂ ▁ ▙) position.	•Set the recording mode selector to the "EQ" (▙ ▁ ▂) position.
	•The input selector of the equalizer is set to the "tape" (▙ ▁ ▂) position.	•Set the input selector of the equalizer to the "source" (▂ ▁ ▙) position.

TECHNICAL SPECIFICATIONS

(DIN 45 500)

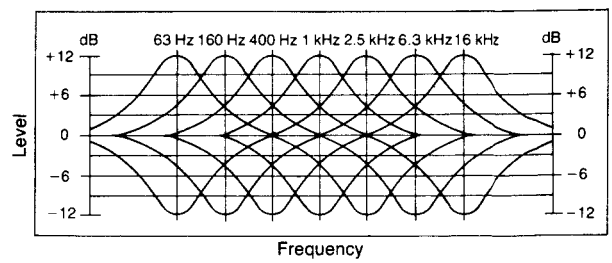
Frequency response (center position)	: 5 Hz~100 kHz, −1 dB
Maximum output voltage	: 8 V (1 kHz, THD 0.01%)
Rated output voltage	: 1 V
Rated total harmonic distortion	: 0.005% (20 Hz~20 kHz) 0.003% (1 kHz)
Input sensitivity	: 1 V
Signal-to-noise ratio	: 100 dB (110 dB, IHF' A)
Maximum input voltage	: 8 V (1 kHz)
Input impedance	: 33 kΩ
Gain	: 0±1 dB
Channel balance 250 Hz~6300 Hz	: ±0.5 dB
Channel separation 1 kHz	: 70 dB
Band level controls	: +12 dB~−12 dB (7 elements continuously variable per channel)
Center frequency	: 63 Hz, 160 Hz, 400 Hz, 1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz

GENERAL

Power supply	: AC 50 Hz/60 Hz 110 V~127 V/220 V~240 V
Power consumption	: 7 W
Dimensions (H×W×D)	: 86×430×193.5 mm (3⅜"×16¹⁵⁄₁₆"×7⅝")
Weight	: 2.1 kg (4.6 lb)

TOTAL FREQUENCY RESPONSE

Frequency response (± 12 dB position)



Panasonic Tokyo Office
Matsushita Electric Trading Co., Ltd.
6th Floor, World Trade Center Bldg., No. 4-1, Hamamatsu-cho 2-Chome,
Minato-ku, Tokyo 105, Japan

Printed in Japan

SQ✕K50152
F0586N0